

ALCATEL-LUCENT 9500 MICROWAVE PACKET RADIO RELEASE 3 ANSI

The Alcatel-Lucent 9500 Microwave Packet Radio (MPR) addresses all microwave applications with a single product family for all traffic (TDM/IP/hybrid) types. Both public and private service providers now have a microwave platform that adds exceptional functionality to their networks. The Alcatel-Lucent 9500 MPR handles traffic by packets natively, yet still fully supports TDM circuits, providing a means to seamlessly migrate to an all-IP infrastructure.



Microwave Service Switch-8 (MSS-8)



Microwave Service Switch-4 (MSS-4)



Microwave Service Switch-1c (MSS-1c)



Microwave Packet Transport (MPT-HL)



Multipurpose Outdoor Unit (ODU)

The Alcatel-Lucent 9500 MPR offers the lowest total cost of ownership (TCO) by reducing both fixed capital expenditures and recurring operational expenses.

FEATURES

- Intelligent nodal IDU that supports up to 12 RF transceivers in hybrid or packet mode
- Hitless switching service-driven adaptive modulation
- Multiservice aggregator with embedded Circuit Emulation Service (CES) (MEF 8) capabilities for Carrier Ethernet transport
- Millimeter wave support
- Multiservice switching capacity greater than 16 Gb/s, and up to 48 Gb/s with EAS cards
- XPIC upgradeable for very high capacity
- Multi-service packet ring ITU-T G.8032
- Radio throughput greater than 4 Gb/s and termination of up to 192 x DS1
- Support of DS3
- Ethernet OAM IEEE 802.1ag
- Support of Synchronous Ethernet (SyncE) + SSM and IEEE 1588v2
- Support of LAG
 - Radio link (NNI)
 - Ethernet user interfaces (UNI)

BENEFITS

- Reduces OPEX
 - Aggregation of multiple access technologies over Ethernet convergence layer, removing the need for new external equipment
- Protects operators' investments and enables backhaul networks for smooth migration from TDM to IP
 - Operates in hybrid (Ethernet/PDH) or packet mode with the same hardware items
- Addresses all microwave applications with common hardware
 - Backwards compatibility with existing hybrid ODU
- Guarantees TDM deterministic behavior for packet transport
 - No performance degradation comparable to native TDM
 - Guarantees high-priority traffic transport even in congested nodes
- Simplified deployment
 - Fast pre-provisioning
 - Quick setup and network planning
- Drastically reduces footprint and rack power dissipation
 - Highest nodal capability with smallest footprint

- Improves scalability and availability
 - End-to-end service-aware management provided by the Alcatel-Lucent 5620 Service Aware Manager (SAM) for the Alcatel-Lucent IP/MPLS Service Router portfolio and the Alcatel-Lucent 1340 Integrated Network Controller (INC), for the Alcatel-Lucent Packet Optical Transport portfolio
- Enhanced performance and reliability with built-in test functionalities
- Embedded synchronization distribution (even in full Ethernet infrastructure)
- Nodal microwave configuration with a single packet matrix switching
- Full redundancy with no single point of failure, including Ethernet matrix switch

- Control and switching module
 - 4 x 10/100/1000 BaseT
 - 2 x Small Form Factor Pluggable (SFP)
- 8 x Ethernet access card
 - 4 x 10/100/1000 BaseT
 - 4 x SFP
 - 2 x DS1 SFP

Synchronization

- Any synchronization solution in hybrid and packet mode
- Clock distribution options
 - DS1
 - External reference sync-in/sync-out (2 MHz, 5 MHz, 10 MHz)
 - Synchronous Ethernet (Sync E) + SSM G.8264
 - Built-in Stratum 3 clock
 - IEEE 1588v2
- Line clock recovery
 - ACR, DCR

Dimensions

MPT-HL (2.5 RU)

- Weight:
 - 1+1 and 2+0: 12.7 kg (28 lb)
 - 1+0: 8.85 kg (19.5 lb)

IDU (rack, desk or wall-mount)

- MSS-8 (2 RU)
- MSS-4 (1 RU)
- MSS-1c (height: 1 RU, width: 1/2 RU)
- Weight:
 - Fully equipped: <6 kg (13.2 lb)
 - Basic configuration: 2.5 kg (5.5 lb)

ODU

- Weight: 5 kg (11 lb) average

Power supply

MSS

- Standard: -48 V DC to -60 V DC
- Optional: -24 V DC to -60 V DC
- Optional: +24 V DC

MPT-HL

- ±24V DC to ±60 V DC

Services

- Network design and planning
- Hotline
- Express repair and return, swap and repair, and spare-parts management
- On-site visits, urgent interventions, technical assistance
- Training from theory to installation
 - Alcatel-Lucent University
 - Customer premises
- Bundled services during warranty period and warranty extensions

Standards compliance

- EMC: EN 55022 Class B, EN 301 489-1/EN 301 489-4
- Safety: EN 60950-1
- Ecological: ECMA TR/70
- Temperature
 - IDU: -40°C to +65°C (-40°F to +149°F)
 - ODU: -33°C to +55°C (-27°F to +131°F)
 - MPT-HL: -5°C to +55°C (23°F to 131°F)
- NEBS Level 3
- Telcordia GR-63
- Telcordia GR-1089
- IEEE 802.1p/Q VLAN tagging
- IEEE 802.3 10 BaseT
- IEEE 802.3u 100 BaseTX
- IEEE 802.3x Flow Control
- IEEE 802.3z 1000 BaseSX/LX
- IEEE 802.1d Bridging
- IEEE 802.1ad link aggregation
- IEEE 802.1ag Ethernet OAM
- 1000 BaseT per 802.3ab
- MEF 9
- MEF 14



Network and element management

- Integrated network management in Windows environment
- Embedded Web browser for NE supervision
- Software-based configuration by PC
- Intuitive supervision systems
- SNMP agent with TCP/IP rerouting capability
- Interoperable with all Alcatel-Lucent wireless microwave and transmission equipment
- Fully compatible with the Alcatel-Lucent Transmission System Manager (TSM) 8000, Alcatel-Lucent 1340 INC and Alcatel-Lucent 5620 SAM

Traffic management and QoS

- Marking based on:
 - Layer 2 (802.1p)
 - Layer 3 (DiffServ)

TECHNICAL SPECIFICATIONS

Applications

- Backhaul and backbone transport for mobile service providers
- Interconnection of private land mobile radios for public safety and industry
- Wide area network (WAN) connectivity for enterprises, Internet service providers (ISPs) and carriers

Configuration options

- Radio terminal
- Radio repeater
- Multidirectional radio node
- Aggregation shelf (no radio frequency [RF])

Radio-to-MSS connections

- ODU: Up to 12 NSB or 6 MHSB
- MPT-HL: Up to 12 NSB or 6 HSB
- Or a combination of the above

Operating frequencies

- ODU: Lower and upper 6 GHz, 7/8 GHz, 11 GHz, 15 GHz, 18 GHz and 23 GHz (refer to Tables 3, 4, 5 and 6 for exact values)
- MPT-HL: 5.8 GHz, lower and upper 6 GHz, 7/8 GHz and 10/11 GHz (refer to Table 1 and Table 2 for exact values)

Radio frequency transceiver

- Synthesized source

User interfaces

100% front access for all interfaces

- DS1 access card
 - 32 x DS1 each
- DS3 access card
 - 2 x DS3 each

Table 1-1. Mpt-hl (indoor) with static modulation

MPT-HL (INDOOR) WITH STATIC MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER¹ (dBm)	THRESHOLD² (10⁻⁶ BER) (dBm)	SYSTEM GAIN³ (dB)
5.8 GHz unlicensed	65	MPT-HL	5	128	25.8	31.0	-79.0	110.0
		MPT-HL	10	32	37.3	32.0	-82.0	114.0
		MPT-HL	10	128	52.6	31.0	-76.0	107.0
		MPT-HL	30	32	114.2	32.0	-77.5	109.5
		MPT-HL	30	128	160.2	31.0	-71.0	102.0
		MPT-HL	30	256	183.3	28.0	-67.5	95.5
Lower 6 GHz standard power	252.4	MPT-HL	5	128	25.8	31.0	-79.0	110.0
		MPT-HL	10	128	52.6	31.0	-76.0	107.0
		MPT-HL	30	128	160.2	31.0	-71.0	102.0
		MPT-HL	30	128	131.1	31.0	-74.5	105.5
		MPT-HL	30	256	183.3	28.0	-67.5	95.5
		MPT-HL	30	256	160.2	28.0	-70.5	98.5
Lower 6 GHz high power	252.4	MPT-HL	5	128	25.8	33.0	-79.0	112.0
		MPT-HL	10	128	52.6	33.0	-76.0	109.0
		MPT-HL	30	128	160.2	33.0	-71.0	104.0
		MPT-HL	30	128	131.1	33.0	-74.5	107.5
		MPT-HL	30	256	183.3	30.0	-67.5	97.5
		MPT-HL	30	256	160.2	30.0	-70.5	100.5
Upper 6 GHz standard power	160, 340	MPT-HL	5	128	25.8	31.0	-79.0	110.0
		MPT-HL	10	128	52.6	31.0	-76.0	107.0
		MPT-HL	30	128	160.2	31.0	-71.0	102.0
		MPT-HL	30	128	131.1	31.0	-74.5	105.5
		MPT-HL	30	256	183.3	28.0	-67.5	95.5
		MPT-HL	30	256	160.2	28.0	-70.5	98.5
Upper 6 GHz high power	160, 340	MPT-HL	5	128	25.8	33.0	-79.0	112.0
		MPT-HL	10	128	52.6	33.0	-76.0	109.0
		MPT-HL	30	128	160.2	33.0	-71.0	104.0
		MPT-HL	30	128	131.1	33.0	-74.5	107.5
		MPT-HL	30	256	183.3	30.0	-67.5	97.5
		MPT-HL	30	256	160.2	30.0	-70.5	100.5

Notes:

Not all profiles may be available in current software release.

Not all frequencies may be currently available.

¹ Transmit power is measured at the output of the power amplifier.

² Typical, as measured at the input to the radio receiver.

³ Typical, as measured from transmitter to receiver.

These specifications are subject to change without notice.

Table 1-2. MPT-HL (indoor) with static modulation

MPT-HL (INDOOR) WITH STATIC MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER¹ (dBm)	THRESHOLD² (10⁻⁶ BER) (dBm)	SYSTEM GAIN³ (dB)
7/8 GHz	150, 175, 300, 360	MPT-HL	5	32	18.3	33.0	-84.0	117.0
		MPT-HL	5	128	25.8	32.0	-78.0	110.0
		MPT-HL	10	32	37.3	33.0	-81.0	114.0
		MPT-HL	10	128	52.6	32.0	-75.0	107.0
		MPT-HL	30	32	114.2	33.0	-76.5	109.5
		MPT-HL	30	128	160.2	32.0	-70.0	102.0
		MPT-HL	30	128	131.1	32.0	-73.5	105.5
		MPT-HL	30	256	183.3	29.0	-66.5	95.5
		MPT-HL	30	256	160.2	29.0	-69.5	98.5
10.5 GHz	65	MPT-HL	5	128	25.8	29.0	-77.5	106.5
11 GHz	490, 500	MPT-HL	5	32	18.3	30.0	-83.5	113.5
		MPT-HL	5	128	25.8	29.0	-77.5	106.5
		MPT-HL	10	32	37.3	30.0	-80.5	110.5
		MPT-HL	10	128	52.6	29.0	-74.5	103.5
		MPT-HL	30	32	114.2	30.0	-76.0	106.0
		MPT-HL	30	128	160.2	29.0	-69.5	98.5
		MPT-HL	30	128	131.1	29.0	-73.0	102.0
		MPT-HL	30	256	183.3	26.0	-66.0	92.0
		MPT-HL	30	256	160.2	26.0	-69.0	95.0
		MPT-HL	40	128	213.9	29.0	-68.5	97.5
MPT-HL	40	256	245.2	26.0	-65.0	91.0		

Notes:

Not all profiles may be available in current software release.

Not all frequencies may be currently available.

¹ Transmit power is measured at the output of the power amplifier.

² Typical, as measured at the input to the radio receiver.

³ Typical, as measured from transmitter to receiver.

These specifications are subject to change without notice.

Table 2. MPT-HL (indoor) with adaptive modulation

MPT-HL (INDOOR) WITH ADAPTIVE MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER ¹ (dBm)	THRESHOLD ² (10 ⁻⁶ BER) (dBm)	SYSTEM GAIN ³ (dB)
5.8 GHz unlicensed	65	MPT-HL	30	4	44.9	32.0	-85.5	117.5
		MPT-HL	30	16	90.9	32.0	-79.5	111.5
		MPT-HL	30	64	136.9	31.0	-73.5	104.5
		MPT-HL	30	128	159.9	31.0	-70.0	101.0
		MPT-HL	30	256	182.9	28.0	-66.5	94.5
Lower 6 GHz standard power	252.4	MPT-HL	30	4	44.9	32.0	-85.5	117.5
		MPT-HL	30	16	90.9	32.0	-79.5	111.5
		MPT-HL	30	64	136.9	31.0	-73.5	104.5
		MPT-HL	30	128	159.9	31.0	-70.0	101.0
		MPT-HL	30	256	182.9	28.0	-66.5	94.5
Lower 6 GHz high power	252.4	MPT-HL	30	4	44.9	34.0	-85.5	119.5
		MPT-HL	30	16	90.9	34.0	-79.5	113.5
		MPT-HL	30	64	136.9	33.0	-73.5	106.5
		MPT-HL	30	128	159.9	33.0	-70.0	103.0
		MPT-HL	30	256	182.9	30.0	-66.5	96.5
Upper 6 GHz standard power	160, 340	MPT-HL	30	4	44.9	32.0	-85.5	117.5
		MPT-HL	30	16	90.9	32.0	-79.5	111.5
		MPT-HL	30	64	136.9	31.0	-73.5	104.5
		MPT-HL	30	128	159.9	31.0	-70.0	101.0
		MPT-HL	30	256	182.9	28.0	-66.5	94.5
Upper 6 GHz high power	160, 340	MPT-HL	30	4	44.9	34.0	-85.5	119.5
		MPT-HL	30	16	90.9	34.0	-79.5	113.5
		MPT-HL	30	64	136.9	33.0	-73.5	106.5
		MPT-HL	30	128	159.9	33.0	-70.0	103.0
		MPT-HL	30	256	182.9	30.0	-66.5	96.5
7/8 GHz	150, 175, 300, 360	MPT-HL	30	4	44.9	32.0	-85.0	117.0
		MPT-HL	30	16	90.9	32.0	-79.0	111.0
		MPT-HL	30	64	136.9	31.0	-73.0	104.0
		MPT-HL	30	128	159.9	31.0	-69.5	100.5
		MPT-HL	30	256	182.9	28.0	-66.0	94.0
11 GHz	490, 500	MPT-HL	30	4	44.9	30.0	-84.5	114.5
		MPT-HL	30	16	90.9	30.0	-78.5	108.5
		MPT-HL	30	64	136.9	29.0	-72.5	101.5
		MPT-HL	30	128	159.9	29.0	-69.0	98.0
		MPT-HL	30	256	182.9	26.0	-65.5	91.5

Notes:

Not all profiles may be available in current software release.

Not all frequencies may be currently available.

¹ Transmit power is measured at the output of the power amplifier.

² Typical, as measured at the input to the radio receiver.

³ Typical, as measured from transmitter to receiver.

These specifications are subject to change without notice.

Table 3-1. MPT-HC with static modulation

MPT-HC WITH STATIC MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER (dBm)	THRESHOLD ¹ (10 ⁻⁶ BER) (dBm)	SYSTEM GAIN ¹ (dB)
5.8 GHz unlicensed	65	MPT-HC	10	128	52.87	22.0	-75.0	97.0
		MPT-HC	30	64	138.02	22.0	-74.0	96.0
		MPT-HC	30	128	162.88	22.0	-71.0	93.0
		MPT-HC	30	256	185.37	22.0	-68.0	90.0
Lower 6 GHz	252.4	MPT-HC	10	128	52.87	23.0	-76.0	99.0
		MPT-HC	30	64	138.02	23.0	-75.0	98.0
		MPT-HC	30	128	162.88	23.0	-72.0	95.0
		MPT-HC	30	256	185.37	23.0	-69.0	92.0
Upper 6 GHz	160, 340	MPT-HC	10	128	52.87	22.0	-75.0	97.0
		MPT-HC	30	64	138.02	22.0	-74.0	96.0
		MPT-HC	30	128	162.88	22.0	-71.0	93.0
		MPT-HC	30	256	185.37	22.0	-68.0	90.0
7/8 GHz	175, 300	MPT-HC	10	128	52.87	22.0	-75.0	97.0
		MPT-HC	30	64	138.02	24.0	-74.0	98.0
		MPT-HC	30	128	162.88	24.0	-71.0	95.0
		MPT-HC	30	256	185.37	24.0	-68.0	92.0
11 GHz	490, 500	MPT-HC	10	128	52.87	19.0	-75.5	94.5
		MPT-HC	30	64	138.02	21.0	-74.5	95.5
		MPT-HC	30	128	162.88	21.0	-71.5	92.5
		MPT-HC	30	256	185.37	21.0	-68.5	89.5
		MPT-HC	40	64	186.98	21.0	-73.0	94.0
		MPT-HC	40	128	220.63	21.0	-70.5	91.5
		MPT-HC	40	256	251.10	21.0	-67.0	88.0
15 GHz	475, 640	MPT-HC	10	128	52.87	22.0	-75.0	97.0
		MPT-HC	30	64	138.02	22.0	-74.0	96.0
		MPT-HC	30	128	162.88	22.0	-71.0	93.0
		MPT-HC	30	256	185.37	20.0	-68.0	88.0
		MPT-HC	40	64	186.98	22.0	-72.5	94.5
		MPT-HC	40	128	220.63	22.0	-69.5	91.5
		MPT-HC	40	256	251.10	20.0	-66.5	86.5
18 GHz	1560	MPT-HC	10	64	44.81	19.0	-76.5	95.5
		MPT-HC	10	128	52.87	19.0	-74.0	93.0
		MPT-HC	30	64	138.02	19.0	-73.0	92.0
		MPT-HC	30	128	162.88	19.0	-70.0	89.0
		MPT-HC	30	256	185.37	18.0	-67.0	85.0
		MPT-HC	40	64	186.98	19.0	-71.5	90.5
		MPT-HC	40	128	220.63	19.0	-68.5	87.5
		MPT-HC	40	256	251.10	18.0	-65.5	83.5
		MPT-HC	50	64	234.23	19.0	-71.0	90.0
		MPT-HC	50	128	276.37	19.0	-67.5	86.5
MPT-HC	50	256	314.46	18.0	-65.0	83.0		

Notes:

Not all profiles are available in current software release.

Not all frequencies may be currently available.

Transmit power, receiver threshold and system gain are typical values and are referenced at the ODU antenna flange.

¹ For guaranteed value, subtract 2 dB from typical transmission power and add 2 dB to typical receiver thresholds.

These specifications are subject to change without notice.

5.8 GHz MPT-HC for unlicensed applications have not been certified under FCC Part 15 as of yet, and cannot be marketed, proposed, sold or deployed at this time.

Table 3-2. MPT-HC with static modulation

MPT-HC WITH STATIC MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER (dBm)	THRESHOLD ¹ (10 ⁻⁶ BER) (dBm)	SYSTEM GAIN ¹ (dB)
23 GHz	1200	MPT-HC	10	64	44.81	18.0	-77.0	95.0
		MPT-HC	10	128	52.87	18.0	-74.5	92.5
		MPT-HC	30	64	138.02	18.0	-73.5	91.5
		MPT-HC	30	128	162.88	18.0	-70.5	88.5
		MPT-HC	30	256	185.37	18.0	-67.5	85.5
		MPT-HC	40	64	186.98	18.0	-72.0	90.0
		MPT-HC	40	128	220.63	18.0	-69.0	87.0
		MPT-HC	40	256	251.10	18.0	-66.0	84.0
		MPT-HC	50	64	234.23	18.0	-71.5	89.5
		MPT-HC	50	128	276.37	18.0	-68.0	86.0
		MPT-HC	50	256	314.46	18.0	-65.5	83.5
		38 GHz	700	MPT-HC	10	64	44.81	14.0
MPT-HC	10			128	52.87	14.0	-71.5	85.5
MPT-HC	30			64	138.02	14.0	-70.5	84.5
MPT-HC	30			128	162.88	14.0	-67.5	81.5
MPT-HC	30			256	185.37	13.0	-64.5	77.5
MPT-HC	40			64	186.98	14.0	-69.0	83.0
MPT-HC	40			128	220.63	14.0	-66.0	80.0
MPT-HC	40			256	251.10	13.0	-63.0	76.0
MPT-HC	50			64	234.23	14.0	-68.5	82.5
MPT-HC	50			128	276.37	14.0	-65.0	79.0
MPT-HC	50			256	314.46	13.0	-62.5	75.5

Notes:

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Not all frequencies may be currently available.

Transmit power, receiver threshold and system gain are typical values and are referenced at the ODU antenna flange.

¹ For guaranteed value, subtract 2 dB from typical transmission power and add 2 dB to typical receiver thresholds.

These specifications are subject to change without notice.

5.8 GHz MPT-HC for unlicensed applications have not been certified under FCC Part 15 as of yet, and cannot be marketed, proposed, sold or deployed at this time.

Table 4-1. MPT-HC with adaptive modulation

MPT-HC WITH ADAPTIVE MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER (dBm)	THRESHOLD ¹ (10 ⁻⁶ BER) (dBm)	SYSTEM GAIN ¹ (dB)
5.8 GHz unlicensed	65	MPT-HC	10	4	14.04	25.0	-91.0	116.0
		MPT-HC	10	8	21.13	25.0	-86.5	111.5
		MPT-HC	10	16	28.29	24.0	-84.5	108.5
		MPT-HC	10	32	35.06	24.0	-80.0	104.0
		MPT-HC	10	64	44.81	22.0	-77.5	99.5
		MPT-HC	10	128	52.87	22.0	-75.0	97.0
		MPT-HC	10	256	60.27	22.0	-71.5	93.5
		MPT-HC	30	4	43.86	25.0	-87.0	112.0
		MPT-HC	30	8	65.51	25.0	-82.0	107.0
		MPT-HC	30	16	87.45	24.0	-80.0	104.0
		MPT-HC	30	32	108.76	24.0	-77.0	101.0
		MPT-HC	30	64	138.02	22.0	-74.0	96.0
		MPT-HC	30	128	162.88	22.0	-71.0	93.0
		MPT-HC	30	256	185.37	22.0	-68.0	90.0
Lower 6 GHz	252.4	MPT-HC	10	4 *	14.04	26.0	-92.0	118.0
		MPT-HC	10	8 *	21.13	26.0	-87.5	113.5
		MPT-HC	10	16 *	28.29	25.0	-85.5	110.5
		MPT-HC	10	32 *	35.06	25.0	-81.0	106.0
		MPT-HC	10	64	44.81	23.0	-78.5	101.5
		MPT-HC	10	128	52.87	23.0	-76.0	99.0
		MPT-HC	10	256	60.27	23.0	-72.5	95.5
		MPT-HC	30	4 *	43.86	26.0	-88.0	114.0
		MPT-HC	30	8 *	65.51	26.0	-83.0	109.0
		MPT-HC	30	16 *	87.45	25.0	-81.0	106.0
		MPT-HC	30	32 *	108.76	25.0	-78.0	103.0
		MPT-HC	30	64	138.02	23.0	-75.0	98.0
		MPT-HC	30	128	162.88	23.0	-72.0	95.0
		MPT-HC	30	256	185.37	23.0	-69.0	92.0
Upper 6 GHz	160, 340	MPT-HC	10	4 *	14.04	25.0	-91.0	116.0
		MPT-HC	10	8 *	21.13	25.0	-86.5	111.5
		MPT-HC	10	16 *	28.29	24.0	-84.5	108.5
		MPT-HC	10	32 *	35.06	24.0	-80.0	104.0
		MPT-HC	10	64	44.81	22.0	-77.5	99.5
		MPT-HC	10	128	52.87	22.0	-75.0	97.0
		MPT-HC	10	256	60.27	22.0	-71.5	93.5
		MPT-HC	30	4 *	43.86	25.0	-87.0	112.0
		MPT-HC	30	8 *	65.51	25.0	-82.0	107.0
		MPT-HC	30	16 *	87.45	24.0	-80.0	104.0
		MPT-HC	30	32 *	108.76	24.0	-77.0	101.0
		MPT-HC	30	64	138.02	22.0	-74.0	96.0
		MPT-HC	30	128	162.88	22.0	-71.0	93.0
		MPT-HC	30	256	185.37	22.0	-68.0	90.0

Notes:

Not all profiles are available in current software release.

Not all frequencies may be currently available.

Transmit power, receiver threshold and system gain are typical values and are referenced at the ODU antenna flange

¹ For guaranteed value, subtract 2 dB from typical transmission power and add 2 dB to typical receiver thresholds.

* Subject to FCC Part 101 Rules.

These specifications are subject to change without notice.

5.8 GHz MPT-HC for unlicensed applications have not been certified under FCC Part 15 as of yet, and cannot be marketed, proposed, sold or deployed at this time.

Table 4-2. MPT-HC with adaptive modulation

MPT-HC WITH ADAPTIVE MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER (dBm)	THRESHOLD ¹ (10 ⁻⁶ BER) (dBm)	SYSTEM GAIN ¹ (dB)
7/8 GHz	175, 300	MPT-HC	10	4	14.04	24.0	-91.0	115.0
		MPT-HC	10	8	21.13	24.0	-86.5	110.5
		MPT-HC	10	16	28.29	23.0	-84.5	107.5
		MPT-HC	10	32	35.06	23.0	-80.0	103.0
		MPT-HC	10	64	44.81	22.0	-77.5	99.5
		MPT-HC	10	128	52.87	22.0	-75.0	97.0
		MPT-HC	10	256	60.27	22.0	-71.5	93.5
		MPT-HC	30	4	43.86	26.0	-87.0	113.0
		MPT-HC	30	8	65.51	26.0	-82.0	108.0
		MPT-HC	30	16	87.45	25.0	-80.0	105.0
		MPT-HC	30	32	108.76	25.0	-77.0	102.0
		MPT-HC	30	64	138.02	24.0	-74.0	98.0
		MPT-HC	30	128	162.88	24.0	-71.0	95.0
		MPT-HC	30	256	185.37	24.0	-68.0	92.0
		11 GHz	490, 500	MPT-HC	10	4 *	14.04	21.0
MPT-HC	10			8 *	21.13	21.0	-87.0	108.0
MPT-HC	10			16 *	28.29	20.0	-85.5	105.5
MPT-HC	10			32 *	35.06	20.0	-80.5	100.5
MPT-HC	10			64	44.81	19.0	-78.0	97.0
MPT-HC	10			128	52.87	19.0	-75.5	94.5
MPT-HC	10			256	60.27	19.0	-72.0	91.0
MPT-HC	30			4 *	43.86	23.0	-87.5	110.5
MPT-HC	30			8 *	65.51	23.0	-82.5	105.5
MPT-HC	30			16 *	87.45	23.0	-80.5	103.5
MPT-HC	30			32	108.76	23.0	-77.5	100.5
MPT-HC	30			64	138.02	21.0	-74.5	95.5
MPT-HC	30			128	162.88	21.0	-71.5	92.5
MPT-HC	30			256	185.37	21.0	-68.5	89.5
MPT-HC	40			4 *	59.49	23.0	-85.5	108.5
MPT-HC	40			8 *	88.81	23.0	-81.0	104.0
MPT-HC	40			16 *	118.51	23.0	-79.5	102.5
MPT-HC	40			32	147.37	23.0	-76.0	99.0
MPT-HC	40			64	186.98	21.0	-73.0	94.0
MPT-HC	40			128	220.63	21.0	-70.5	91.5
MPT-HC	40	256	251.10	21.0	-67.0	88.0		

Notes:

Not all profiles are available in current software release.

Not all frequencies may be currently available.

Transmit power, receiver threshold and system gain are typical values and are referenced at the ODU antenna flange.

¹ For guaranteed value, subtract 2 dB from typical transmission power and add 2 dB to typical receiver thresholds.

* Subject to FCC Part 101 Rules.

These specifications are subject to change without notice.

5.8 GHz MPT-HC for unlicensed applications have not been certified under FCC Part 15 as of yet, and cannot be marketed, proposed, sold or deployed at this time.

Table 4-3. MPT-HC with adaptive modulation

MPT-HC WITH ADAPTIVE MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER (dBm)	THRESHOLD ¹ (10 ⁻⁶ BER) (dBm)	SYSTEM GAIN ¹ (dB)
15 GHz	475, 640	MPT-HC	10	4	14.04	25.0	-91.0	116.0
		MPT-HC	10	8	21.13	25.0	-86.5	111.5
		MPT-HC	10	16	28.29	23.0	-84.5	107.5
		MPT-HC	10	32	35.06	23.0	-80.0	103.0
		MPT-HC	10	64	44.81	22.0	-77.5	99.5
		MPT-HC	10	128	52.87	22.0	-75.0	97.0
		MPT-HC	10	256	60.27	20.0	-71.5	91.5
		MPT-HC	30	4	43.86	25.0	-87.0	112.0
		MPT-HC	30	8	65.51	25.0	-82.0	107.0
		MPT-HC	30	16	87.45	23.0	-80.0	103.0
		MPT-HC	30	32	108.76	23.0	-77.0	100.0
		MPT-HC	30	64	138.02	22.0	-74.0	96.0
		MPT-HC	30	128	162.88	22.0	-71.0	93.0
		MPT-HC	30	256	185.37	20.0	-68.0	88.0
		MPT-HC	40	4	59.49	25.0	-85.0	110.0
		MPT-HC	40	8	88.81	25.0	-80.5	105.5
		MPT-HC	40	16	118.51	23.0	-79.0	102.0
		MPT-HC	40	32	147.37	23.0	-75.5	98.5
		MPT-HC	40	64	186.98	22.0	-72.5	94.5
		MPT-HC	40	128	220.63	22.0	-69.5	91.5
MPT-HC	40	256	251.10	20.0	-66.5	86.5		
18 GHz	1560	MPT-HC	10	4	14.04	22.0	-90.0	112.0
		MPT-HC	10	8	21.13	22.0	-85.5	107.5
		MPT-HC	10	16	28.29	20.0	-83.5	103.5
		MPT-HC	10	32	35.06	20.0	-79.0	99.0
		MPT-HC	10	64	44.81	19.0	-76.5	95.5
		MPT-HC	10	128	52.87	19.0	-74.0	93.0
		MPT-HC	10	256	60.27	18.0	-70.5	88.5
		MPT-HC	30	4	43.86	22.0	-86.0	108.0
		MPT-HC	30	8	65.51	22.0	-81.0	103.0
		MPT-HC	30	16	87.45	20.0	-79.0	99.0
		MPT-HC	30	32	108.76	20.0	-76.0	96.0
		MPT-HC	30	64	138.02	19.0	-73.0	92.0
		MPT-HC	30	128	162.88	19.0	-70.0	89.0
		MPT-HC	30	256	185.37	18.0	-67.0	85.0
		MPT-HC	40	4	59.49	22.0	-84.0	106.0
		MPT-HC	40	8	88.81	22.0	-79.5	101.5
		MPT-HC	40	16	118.51	20.0	-78.0	98.0
		MPT-HC	40	32	147.37	20.0	-74.5	94.5

Notes:

Not all profiles are available in current software release.

Not all frequencies may be currently available.

Transmit power, receiver threshold and system gain are typical values and are referenced at the ODU antenna flange.

¹ For guaranteed value, subtract 2 dB from typical transmission power and add 2 dB to typical receiver thresholds.

* Subject to FCC Part 101 Rules.

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Table 4-4. MPT-HC with adaptive modulation

MPT-HC WITH ADAPTIVE MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER (dBm)	THRESHOLD ¹ (10 ⁻⁶ BER) (dBm)	SYSTEM GAIN ¹ (dB)
18 GHz		MPT-HC	40	64	186.98	19.0	-71.5	90.5
		MPT-HC	40	128	220.63	19.0	-68.5	87.5
		MPT-HC	40	256	251.10	18.0	-65.5	83.5
		MPT-HC	50	4	74.59	22.0	-83.0	105.0
		MPT-HC	50	8	111.29	22.0	-78.5	100.5
		MPT-HC	50	16	148.49	20.0	-77.0	97.0
		MPT-HC	50	32	184.61	20.0	-74.0	94.0
		MPT-HC	50	64	234.23	19.0	-71.0	90.0
		MPT-HC	50	128	276.37	19.0	-67.5	86.5
		MPT-HC	50	256	314.46	18.0	-65.0	83.0
23 GHz	1200	MPT-HC	10	4	14.04	20.0	-90.5	110.5
		MPT-HC	10	8	21.13	20.0	-86.0	106.0
		MPT-HC	10	16	28.29	19.0	-84.0	103.0
		MPT-HC	10	32	35.06	19.0	-79.5	98.5
		MPT-HC	10	64	44.81	18.0	-77.0	95.0
		MPT-HC	10	128	52.87	18.0	-74.5	92.5
		MPT-HC	10	256	60.27	18.0	-71.0	89.0
		MPT-HC	30	4	43.86	20.0	-86.5	106.5
		MPT-HC	30	8	65.51	20.0	-81.5	101.5
		MPT-HC	30	16	87.45	19.0	-79.5	98.5
		MPT-HC	30	32	108.76	19.0	-76.5	95.5
		MPT-HC	30	64	138.02	18.0	-73.5	91.5
		MPT-HC	30	128	162.88	18.0	-70.5	88.5
		MPT-HC	30	256	185.37	18.0	-67.5	85.5
		MPT-HC	40	4	59.49	20.0	-84.5	104.5
		MPT-HC	40	8	88.81	20.0	-80.0	100.0
		MPT-HC	40	16	118.51	19.0	-78.5	97.5
		MPT-HC	40	32	147.37	19.0	-75.0	94.0
		MPT-HC	40	64	186.98	18.0	-72.0	90.0
		MPT-HC	40	128	220.63	18.0	-69.0	87.0
		MPT-HC	40	256	251.10	18.0	-66.0	84.0
		MPT-HC	50	4	74.59	20.0	-83.5	103.5
		MPT-HC	50	8	111.29	20.0	-79.0	99.0
		MPT-HC	50	16	148.49	19.0	-77.5	96.5
		MPT-HC	50	32	184.61	19.0	-74.5	93.5
		MPT-HC	50	64	234.23	18.0	-71.5	89.5
		MPT-HC	50	128	276.37	18.0	-68.0	86.0
		MPT-HC	50	256	314.46	18.0	-65.5	83.5

Notes:

Not all profiles are available in current software release.

Not all frequencies may be currently available.

Transmit power, receiver threshold and system gain are typical values and are referenced at the ODU antenna flange.

¹ For guaranteed value, subtract 2 dB from typical transmission power and add 2 dB to typical receiver thresholds.

* Subject to FCC Part 101 Rules.

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5.8 GHz MPT-HC for unlicensed applications have not been certified under FCC Part 15 as of yet, and cannot be marketed, proposed, sold or deployed at this time.

Table 4-5. MPT-HC with adaptive modulation

MPT-HC WITH ADAPTIVE MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER (dBm)	THRESHOLD ¹ (10 ⁻⁶ BER) (dBm)	SYSTEM GAIN ¹ (dB)
38 GHz	700	MPT-HC	10	4	14.04	18.0	-87.5	105.5
		MPT-HC	10	8	21.13	18.0	-83.0	101.0
		MPT-HC	10	16	28.29	16.0	-81.0	97.0
		MPT-HC	10	32	35.06	16.0	-76.5	92.5
		MPT-HC	10	64	44.81	14.0	-74.0	88.0
		MPT-HC	10	128	52.87	14.0	-71.5	85.5
		MPT-HC	10	256	60.27	13.0	-68.0	81.0
		MPT-HC	30	4	43.86	18.0	-83.5	101.5
		MPT-HC	30	8	65.51	18.0	-78.5	96.5
		MPT-HC	30	16	87.45	16.0	-76.5	92.5
		MPT-HC	30	32	108.76	16.0	-73.5	89.5
		MPT-HC	30	64	138.02	14.0	-70.5	84.5
		MPT-HC	30	128	162.88	14.0	-67.5	81.5
		MPT-HC	30	256	185.37	13.0	-64.5	77.5
		MPT-HC	40	4	59.49	18.0	-81.5	99.5
		MPT-HC	40	8	88.81	18.0	-77.0	95.0
		MPT-HC	40	16	118.51	16.0	-75.5	91.5
		MPT-HC	40	32	147.37	16.0	-72.0	88.0
		MPT-HC	40	64	186.98	14.0	-69.0	83.0
		MPT-HC	40	128	220.63	14.0	-66.0	80.0
		MPT-HC	40	256	251.10	13.0	-63.0	76.0
		MPT-HC	50	4	74.59	18.0	-80.5	98.5
		MPT-HC	50	8	111.29	18.0	-76.0	94.0
		MPT-HC	50	16	148.49	16.0	-74.5	90.5
		MPT-HC	50	32	184.61	16.0	-71.5	87.5
		MPT-HC	50	64	234.23	14.0	-68.5	82.5
		MPT-HC	50	128	276.37	14.0	-65.0	79.0
		MPT-HC	50	256	314.46	13.0	-62.5	75.5

Notes:

Not all profiles are available in current software release.

Not all frequencies may be currently available.

Transmit power, receiver threshold and system gain are typical values and are referenced at the ODU antenna flange.

¹ For guaranteed value, subtract 2 dB from typical transmission power and add 2 dB to typical receiver thresholds.

* Subject to FCC Part 101 Rules.

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Table 4-6. MPT-HC with XPIC

MPT-HC WITH XPIC								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER (dBm)	THRESHOLD¹ (10⁻⁶ BER) (dBm)	SYSTEM GAIN¹ (dB)
Lower 6 GHz	252.4	MPT-HC	30	128	162.88	23.0	-71.0	94.0
		MPT-HC	30	256	183.11	23.0	-68.0	91.0
Upper 6 GHz	160, 340	MPT-HC	30	128	162.88	22.0	-70.0	92.0
		MPT-HC	30	256	183.11	22.0	-67.0	89.0
11 GHz	490, 500	MPT-HC	30	128	162.88	21.0	-70.5	91.5
		MPT-HC	30	256	183.11	21.0	-67.5	88.5
		MPT-HC	40	128	220.72	21.0	-69.5	90.5
		MPT-HC	40	256	244.58	21.0	-66.0	87.0
18 GHz	1560	MPT-HC	30	128	162.88	19.0	-69.0	88.0
		MPT-HC	30	256	183.15	18.0	-66.0	84.0
		MPT-HC	40	128	220.72	19.0	-67.5	86.5
		MPT-HC	40	256	244.58	18.0	-64.5	82.5
		MPT-HC	50	128	276.46	19.0	-66.5	85.5
		MPT-HC	50	256	306.83	18.0	-64.0	82.0
23 GHz	1200	MPT-HC	30	128	162.88	18.0	-69.5	87.5
		MPT-HC	30	256	183.11	18.0	-66.5	84.5
		MPT-HC	40	128	220.72	18.0	-68.0	86.0
		MPT-HC	40	256	244.58	18.0	-65.0	83.0
		MPT-HC	50	128	276.46	18.0	-67.0	85.0
		MPT-HC	50	256	306.83	18.0	-64.5	82.5
38 GHz	700	MPT-HC	30	128	162.88	14.0	-66.5	80.5
		MPT-HC	30	256	183.11	13.0	-63.5	76.5
		MPT-HC	40	128	220.72	14.0	-65.0	79.0
		MPT-HC	40	256	244.58	13.0	-62.0	75.0
		MPT-HC	50	128	276.46	14.0	-64.0	78.0
		MPT-HC	50	256	306.83	13.0	-61.5	74.5

Notes:

Not all profiles are available in current software release.

Not all frequencies may be currently available.

Transmit power, receiver threshold and system gain are typical values and are referenced at the ODU antenna flange.

¹ For guaranteed value, subtract 2 dB from typical transmission power and add 2 dB to typical receiver thresholds.

These specifications are subject to change without notice.

Table 5-1. ODU 300 with static modulation

ODU 300 WITH STATIC MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER (dBm)	THRESHOLD ¹ (10 ⁻⁶ BER) (dBm)	SYSTEM GAIN ¹ (dB)
Lower 6 GHz	252.4	ODUv2	10	128	52.64	24.5	-74.0	98.5
		ODUv2	30	128	160.17	24.5	-69.5	94.0
		ODUv2	30	256	183.30	22.5	-65.5	88.0
		ODUv2	30	256	160.17	22.5	-69.0	91.5
Upper 6 GHz	160, 340	ODUv2	10	128	52.64	24.5	-74.0	98.5
7/8 GHz	150, 175, 300	ODUv2	10	128	52.64	24.5	-74.0	98.5
		ODUv2	30	64	131.09	25.5	-73.0	98.5
		ODUv2	30	128	160.17	24.5	-69.5	94.0
		ODUv2	30	128	131.09	24.5	-73.0	97.5
		ODUv2	30	256	183.30	22.5	-65.5	88.0
		ODUv2	30	256	160.17	22.5	-69.0	91.5
11 GHz	490, 500	ODUv2	10	128	52.64	20.0	-73.5	93.5
		ODUv2	30	128	160.17	20.0	-69.0	89.0
		ODUv2	30	128	131.10	20.0	-72.5	92.5
		ODUv2	30	256	183.30	18.0	-65.0	83.0
		ODUv2	30	256	160.17	18.0	-68.5	86.5
		ODUv2	40	32	152.29	21.5	-74.0	95.5
		ODUv2	40	128	213.94	20.0	-67.5	87.5
		ODUv2	40	128	182.30	20.0	-71.0	91.0
		ODUv2	40	256	245.19	18.0	-64.0	82.0
15 GHz	475	ODUv2	30	32	114.22	19.5	-75.0	94.5
		ODUv2	30	128	160.17	18.0	-69.0	87.0
		ODUv2	30	128	131.10	18.0	-71.0	89.0
		ODUv2	30	256	183.30	16.0	-65.0	81.0
		ODUv2	30	256	160.17	16.0	-68.5	84.5
		ODUv2	40	16	122.03	20.0	-75.0	95.0
		ODUv2	40	32	152.29	19.5	-74.0	93.5
		ODUv2	40	128	213.94	18.0	-67.5	85.5
		ODUv2	40	128	183.30	18.0	-71.0	89.0
		ODUv2	40	256	245.19	16.0	-64.0	80.0
		ODUv2	40	256	213.94	16.0	-67.0	83.0

Notes:
 Not all profiles are available in current software release.
 Transmit power, receiver threshold and system gain are typical values and are referenced at the ODU antenna flange.
¹ For guaranteed value, subtract 2 dB from typical transmission power and add 2 dB to typical receiver thresholds.
 These specifications are subject to change without notice.

Table 5-2. ODU 300 with static modulation

ODU 300 WITH STATIC MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER (dBm)	THRESHOLD ¹ (10 ⁻⁶ BER) (dBm)	SYSTEM GAIN ¹ (dB)
18 GHz	1560	ODUv2	10	32	37.32	17.0	-78.5	95.5
		ODUv2	30	32	114.22	17.0	-73.5	90.5
		ODUv2	30	128	160.17	15.5	-67.5	83.0
		ODUv2	30	128	131.10	15.5	-71.0	86.5
		ODUv2	30	128	160.17	17.5	-67.5	85.0
		ODUv2	30	128	131.10	17.5	-71.0	88.5
		ODUv2	30	256	183.30	13.5	-63.5	77.0
		ODUv2	30	256	160.17	13.5	-67.0	80.5
		ODUv2	30	256	183.30	15.0	-63.5	78.5
		ODUv2	30	256	160.17	15.0	-67.0	82.0
		ODUv2	40	32	152.29	17.0	-72.5	89.5
		ODUv2	40	128	213.94	15.5	-66.0	81.5
		ODUv2	40	128	183.30	15.5	-69.5	85.0
		ODUv2	40	128	213.94	17.5	-66.0	83.5
		ODUv2	40	128	183.30	17.5	-69.5	87.0
		ODUv2	40	256	245.19	13.5	-62.0	75.5
		ODUv2	40	256	213.94	13.5	-65.5	79.0
		ODUv2	40	256	245.19	15.0	-62.0	77.0
		ODUv2	40	256	213.94	15.0	-65.5	80.5
		ODUv2	50	32	190.80	17.0	-71.5	88.5
		ODUv2	50	128	267.70	15.5	-65.0	80.5
		ODUv2	50	128	228.00	15.5	-68.5	84.0
		ODUv2	50	128	267.70	17.5	-65.0	82.5
		ODUv2	50	128	228.00	17.5	-68.5	86.0
		ODUv2	50	256	306.77	13.5	-61.0	74.5
		ODUv2	50	256	267.70	13.5	-64.5	78.0
		ODUv2	50	256	306.77	15.0	-61.0	76.0
		ODUv2	50	256	267.70	15.0	-64.5	79.5

Notes:

Not all profiles are available in current software release.

Transmit power, receiver threshold and system gain are typical values and are referenced at the ODU antenna flange.

¹ For guaranteed value, subtract 2 dB from typical transmission power and add 2 dB to typical receiver thresholds.

These specifications are subject to change without notice.

Table 5-3. ODU 300 with static modulation

ODU 300 WITH STATIC MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER (dBm)	THRESHOLD ¹ (10 ⁻⁶ BER) (dBm)	SYSTEM GAIN ¹ (dB)
23 GHz	1200	ODUv2	10	32	37.32	17.0	-78.0	95.0
		ODUv2	30	32	114.22	17.0	-73.0	90.0
		ODUv2	30	128	160.17	15.5	-67.0	82.5
		ODUv2	30	128	131.10	15.5	-70.5	86.0
		ODUv2	30	256	183.30	13.5	-63.0	76.5
		ODUv2	30	256	160.17	13.5	-66.5	80.0
		ODUv2	40	32	152.29	17.0	-72.0	89.0
		ODUv2	40	128	213.94	15.5	-65.5	81.0
		ODUv2	40	128	183.30	15.5	-69.0	84.5
		ODUv2	40	256	245.19	13.5	-61.5	75.0
		ODUv2	40	256	213.94	13.5	-65.0	78.5
		ODUv2	50	32	190.80	17.0	-71.0	88.0
		ODUv2	50	128	267.70	15.5	-64.5	80.0
		ODUv2	50	128	228.63	15.5	-68.0	83.5
		ODUv2	50	256	306.77	13.5	-60.5	74.0
		ODUv2	50	256	267.70	13.5	-64.0	77.5
38 GHz	700	ODUv2	50	256	306.77	11.5	-54.0	65.5
		ODUv2	50	256	267.70	11.5	-57.5	69.0

Notes:

Not all profiles are available in current software release.

Transmit power, receiver threshold and system gain are typical values and are referenced at the ODU antenna flange.

¹ For guaranteed value, subtract 2 dB from typical transmission power and add 2 dB to typical receiver thresholds.

These specifications are subject to change without notice.

Table 6. ODU 300 with adaptive modulation

ODU 300 WITH ADAPTIVE MODULATION								
RF BAND	STANDARD T/R SEPARATION (MHz)	RADIO TYPE	CHANNEL BAND-WIDTH (MHz)	MODULATION (QAM)	LAYER 2 RADIO CAPACITY (Mb/s)	TRANSMIT POWER (dBm)	THRESHOLD ¹ (10 ⁻⁶ BER) (dBm)	SYSTEM GAIN ¹ (dB)
Lower 6 GHz	252.4	ODUv2	10	4 *	14.19	25.5	-89.5	115.0
		ODUv2	10	16 *	29.51	25.5	-83.5	109.0
		ODUv2	10	64	44.83	25.5	-77.0	102.5
		ODUv2	30	4 *	42.95	25.5	-85.0	110.5
		ODUv2	30	16 *	85.02	25.5	-79.0	104.5
		ODUv2	30	64 *	131.10	25.5	-72.5	98.0
Upper 6 GHz	160, 340	ODUv2	10	4 *	14.19	25.5	-89.5	115.0
		ODUv2	10	16 *	29.51	25.5	-83.5	109.0
		ODUv2	10	64	44.83	25.5	-77.0	102.5
7/8 GHz	150, 175, 300	ODUv2	10	4	14.19	25.5	-89.5	115.0
		ODUv2	10	16	29.51	25.5	-83.5	109.0
		ODUv2	10	64	44.83	25.5	-77.0	102.5
		ODUv2	30	4	42.95	25.5	-85.0	110.5
		ODUv2	30	16	85.02	25.5	-79.0	104.5
		ODUv2	30	64	131.10	25.5	-72.5	98.0
11 GHz	490, 500	ODUv2	10	4 *	14.19	21.0	-89.0	110.0
		ODUv2	10	16 *	29.51	21.0	-83.0	104.0
		ODUv2	10	64	44.83	21.0	-76.5	97.5
		ODUv2	30	4 *	42.95	21.0	-84.5	105.5
		ODUv2	30	16 *	85.02	21.0	-78.5	99.5
		ODUv2	30	64	131.10	21.0	-72.0	93.0
15 GHz	475	ODUv2	10	4	14.19	18.5	-88.0	106.5
		ODUv2	10	16	29.51	18.5	-82.0	100.5
		ODUv2	10	64	44.83	18.5	-75.5	94.0
		ODUv2	30	4	42.95	18.5	-83.5	102.0
		ODUv2	30	16	85.02	18.5	-77.5	96.0
		ODUv2	30	64	131.10	18.5	-71.0	89.5
18 GHz	1560	ODUv2	10	4	14.19	16.5	-87.5	104.0
		ODUv2	10	16	29.51	16.5	-81.5	98.0
		ODUv2	10	64	44.83	16.5	-75.0	91.5
		ODUv2	30	4	42.95	16.5	-83.0	99.5
		ODUv2	30	16	85.02	16.5	-77.0	93.5
		ODUv2	30	64	131.10	16.5	-70.5	87.0
23 GHz	1200	ODUv2	10	4	14.19	16.5	-87.0	103.5
		ODUv2	10	16	29.51	16.5	-81.0	97.5
		ODUv2	10	64	44.83	16.5	-74.5	91.0
		ODUv2	30	4	42.95	16.5	-82.5	99.0
		ODUv2	30	16	85.02	16.5	-76.5	93.0
		ODUv2	30	64	131.10	16.5	-70.0	86.5

Notes:

Not all profiles are available in current software release.

Transmit power, receiver threshold and system gain are typical values and are referenced at the ODU antenna flange.

¹ For guaranteed value, subtract 2 dB from typical transmission power and add 2 dB to typical receiver thresholds.

* Subject to FCC Part 101 Rules.

These specifications are subject to change without notice.